Test Type: 90-DAY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

Metal working fluids (Trim SC210)

CAS Number: TRIMSC210

Lab: BNW

Date Report Requested: 08/25/2008

Time Report Requested: 10:19:53

First Dose M/F: 08/14/06 / 08/14/06

F1_RD

C Number: C20516

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F344/N Tac

Lock Date: 05/16/2007

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 2.0.0

Test Type: 90-DAY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

Metal working fluids (Trim SC210)

CAS Number: TRIMSC210

Time Report Requested: 10:19:53 First Dose M/F: 08/14/06 / 08/14/06

Date Report Requested: 08/25/2008

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F344/N Tac

Fischer 344-Taconic RATS MALE	0 mg/m3	25 mg/m3	50 mg/m3	100 mg/m3	200 mg/m3	400 mg/m3
Disposition Summary						
Animals Initially in Study Early Deaths Survivors	10	10	10	10	10	10
Terminal Sacrifice Animals Examined Microscopically	10 10	10 10	10 10	10 10	10 10	10 10
ALIMENTARY SYSTEM						
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Arteriole, Inflammation, Chronic Active Liver	2 [1.0] (10)	(1)	(0)	(1)	(0)	2 [1.0] (10)
Hepatodiaphragmatic Nodule Inflammation, Chronic Active	7 [1.0]	1 [2.0]		1 [1.0]		1 [1.0] 4 [1.0]
CARDIOVASCULAR SYSTEM						
Heart Cardiomyopathy	(10) 9 [1.4]	(0)	(0)	(0)	(0)	(10) 8 [1.9]
ENDOCRINE SYSTEM						
Adrenal Cortex Hyperplasia	(10)	(0)	(0)	(0)	(0)	(10) 1 [1.0]
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Epididymis	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active Preputial Gland Inflammation, Chronic Active	1 [2.0] (10)	(0)	(0)	(0)	(0)	(10) 1 [1.0]

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: 90-DAY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

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Date Report Requested: 08/25/2008

Lab: BNW

Species/Strain: RATS/F344/N Tac

Route: RESPIRATORY EXPOSURE WHOLE BODY

Fischer 344-Taconic RATS MALE	0 mg/m3	25 mg/m3	50 mg/m3	100 mg/m3	200 mg/m3	400 mg/m3
Prostate Hyperplasia, Focal	(10) 1 [1.0]	(0)	(0)	(0)	(0)	(10)
HEMATOPOIETIC SYSTEM						
Lymph Node, Mandibular Ectasia	(9)	(0)	(0)	(0)	(0)	(9) 1 [3.0]
Hyperplasia Lymph Node, Mediastinal Congestion	1 [2.0] (10)	(0)	(0)	(0)	(1) 1 [2.0]	(10)
INTEGUMENTARY SYSTEM						
None						
MUSCULOSKELETAL SYSTEM						
None						
NERVOUS SYSTEM						
Brain Meninges, Inflammation, Focal, Chronic Active	(10) 1 [1.0]	(0)	(0)	(0)	(0)	(10) 1 [1.0]
RESPIRATORY SYSTEM						
Larynx Erosion Inflammation, Acute	(10) 2 [1.0] 4 [1.3]	(10)	(10) 2 [1.5]	(10) 1 [1.0]	(10)	(10)
Inflammation, Active Inflammation, Chronic Active Metaplasia, Squamous Mineralization	4 [1.0]	6 [1.0] 10 [2.0]	10 [1.0] 10 [2.4]	10 [1.0] 10 [3.2] 1 [1.0]	10 [1.9] 10 [3.7]	10 [1.9] 10 [3.8]
Ulcer Squamous Epithelium, Hyperplasia Lung Cyst	2 [1.5] (10) 1 [2.0]	(10)	4 [1.0] (10)	10 [2.1] (10)	10 [2.0] (10)	10 [3.4] (10)

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Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F344/N Tac

Test Type: 90-DAY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

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Lab: BNW

Fischer 344-Taconic RATS MALE	0 mg/m3	25 mg/m3	50 mg/m3	100 mg/m3	200 mg/m3	400 mg/m3
Inflammation, Granulomatous	1 [1.0]					
Inflammation, Chronic Active Metaplasia, Osseous	9 [1.3]	10 [1.0]	10 [1.0]	10 [1.1] 1 [1.0]	10 [1.0]	10 [1.3] 2 [1.0]
Alveolus, Infiltration Cellular, Histiocyte Arteriole, Mineralization	2 [1.0]	2 [1.0]		,	10 [1.0]	10 [1.1] 2 [1.0]
Nose Goblet Cell, Hyperplasia Olfactory Epithelium, Accumulation,	(10)	(10) 10 [2.0] 10 [2.0]	(10) 10 [1.9] 10 [2.0]	(10) 10 [2.0] 10 [2.0]	(10) 10 [2.0] 10 [2.0]	(10) 10 [2.0] 10 [2.1]
Hyaline Droplet Olfactory Epithelium, Inflammation, Suppurative		10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]
Respiratory Epithelium, Accumulation, Hyaline Droplet		10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]
Respiratory Epithelium, Inflammation, Suppurative		10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]
Trachea Inflammation, Chronic Active	(10) 1 [1.0]	(10)	(10)	(10)	(10)	(10) 1 [1.0]
SPECIAL SENSES SYSTEM						
Harderian Gland Inflammation, Chronic Active	(10) 2 [1.0]	(0)	(0)	(0)	(0)	(10) 1 [1.0]
URINARY SYSTEM						
Kidney Nephropathy	(10) 7 [1.1]	(0)	(0)	(0)	(0)	(10) 6 [1.0]

*** END OF MALE ***

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Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F344/N Tac

Test Type: 90-DAY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

Metal working fluids (Trim SC210)

CAS Number: TRIMSC210

Time Report Requested: 10:19:53

Date Report Requested: 08/25/2008

First Dose M/F: 08/14/06 / 08/14/06

Lab: BNW

Fischer 344-Taconic RATS FEMALE	0 mg/m3	25 mg/m3	50 mg/m3	100 mg/m3	200 mg/m3	400 mg/m
Disposition Summary						
Animals Initially in Study Early Deaths Survivors	10	10	10	10	10	10
Terminal Sacrifice Animals Examined Microscopically	10 10	10 10	10 10	10 10	10 10	10 10
ALIMENTARY SYSTEM						
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Arteriole, Inflammation, Chronic Active Liver Basophilic Focus	(10)	(5)	(2)	(1)	(1)	1 [1.0] (10) 1 [3.0]
Hepatodiaphragmatic Nodule Inflammation, Chronic Active Necrosis, Focal, Chronic	8 [1.3]	5 [1.6]	2 [1.5]	1 [1.0]	1 [2.0]	2 [2.0] 8 [1.4] 1 [2.0]
Mesentery Fat, Necrosis	(1) 1 [1.0]	(0)	(0)	(0)	(0)	(0)
Pancreas Atrophy	(10) (10) 2 [1.0]	(0)	(0)	(0)	(0)	(10)
CARDIOVASCULAR SYSTEM						
Heart Cardiomyopathy	(10) 2 [1.0]	(0)	(0)	(0)	(0)	(10) 1 [1.0]
ENDOCRINE SYSTEM						
Adrenal Cortex Accessory Adrenal Cortical Nodule	(10)	(0)	(1)	(0)	(1)	(10) 1 [2.0]

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Date Report Requested: 08/25/2008

Lab: BNW

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F344/N Tac

Decles/Strain: RATS/F344/N Tac					Lab: BINW		
Fischer 344-Taconic RATS FEMALE	0 mg/m3	25 mg/m3	50 mg/m3	100 mg/m3	200 mg/m3	400 mg/m3	
GENITAL SYSTEM							
Ovary Cyst Uterus Endometrium, Hyperplasia	(10) (10)	(1) 1 [1.0] (0)	(0)	(1) 1 [2.0] (0)	(1) 1 [1.0] (0)	(10) 2 [1.5] (10) 1 [1.0]	
HEMATOPOIETIC SYSTEM							
None							
INTEGUMENTARY SYSTEM							
None							
MUSCULOSKELETAL SYSTEM							
None							
NERVOUS SYSTEM							
None							
RESPIRATORY SYSTEM							
Larynx Inflammation, Chronic Active Metaplasia, Squamous Squamous Epithelium, Hyperplasia Lung Inflammation, Chronic Active Metaplasia, Osseous Alveolus, Infiltration Cellular, Histiocyte Arteriole, Mineralization	(10) 1 [1.0] (10) 10 [1.2]	(10) 9 [1.1] 10 [1.6] 6 [1.0] (10) 10 [1.3]	(10) 9 [1.0] 10 [2.1] 4 [1.0] (10) 10 [1.0]	(10) 10 [1.3] 10 [2.8] 10 [2.1] (10) 10 [1.2] 2 [1.0]	(10) 10 [2.0] 10 [3.1] 10 [2.4] (10) 10 [1.3] 1 [1.0] 8 [1.0]	(10) 10 [2.0] 10 [3.8] 10 [3.3] (10) 9 [1.7]	
Nose Inflammation, Chronic Active	(10) 1 [1.0]	(10)	(10)	(10)	(10)	1 [1.0] (10)	
Goblet Cell, Hyperplasia	1 [1.0]	10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]	

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Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F344/N Tac

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Lab: BNW

Fischer 344-Taconic RATS FEMALE	0 mg/m3	25 mg/m3	50 mg/m3	100 mg/m3	200 mg/m3	400 mg/m3
Olfactory Epithelium, Accumulation, Hyaline Droplet		10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]
Olfactory Epithelium, Inflammation, Suppurative		10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.1]
Respiratory Epithelium, Accumulation, Hyaline Droplet		10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]	10 [2.0]
Respiratory Epithelium, Inflammation, Suppurative		10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.1]
Trachea Inflammation, Chronic Active	(10)	(10)	(10)	(10)	(10) 2 [1.0]	(10) 1 [1.0]
SPECIAL SENSES SYSTEM						
Harderian Gland Inflammation, Chronic Active	(10) 1 [1.0]	(0)	(0)	(0)	(0)	(10) 2 [1.0]
URINARY SYSTEM						
Kidney Nephropathy	(10)	(0)	(0)	(0)	(0)	(10) 1 [1.0]

*** END OF REPORT ***

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)